DOCUMENT RESUME

ED 038 757 EA 002 836

AUTHOR	De Lay, Donald H.; And Others
TITLE	Teaching/Learning Processes: PROJECT DESIGN. Educational Needs, Fresno, 1968, Number 18.
INSTITUTION	Fresno City Unified School District, Calif.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Elementary and Secondary Education.
PUB DATE	68
NOTE	61p.
AVAILABLE FROM	Fresno City Unified School District, Calif. 93707
EDRS PRICE	EDRS Price MF-$0.50 HC Not Available from EDRS.
DESCRIPTORS	Data Collection, *Developmental Programs, *Educational Needs, Educational Theories, Field Interviews, *Learning Processes, *Learning Theories, Secondary Education, Student Opinion, Student Teacher Relationship, *Teacher Improvement, Teaching Procedures
IDENTIFIERS	ESEA Title 3 Programs, Fresno, Project Design

ABSTRACT

A theoretical framework of the learning process is presented and then used to evaluate the total educational program in the Fresno City Unified School District as part of PROJECT DESIGN, funded under ESEA Title III. According to this framework, the learner must develop a self-concept by which he feels he can learn. From this self-concept the learner must experience alternatives, that is, become actively involved in selecting what he wants to learn and how and when he wants to learn it. By being allowed to explore and search for meaning, an inquiring process is developed. The power of learning resides in the ability to keep a question open, lending to a concept of education as continuous or open ended. It is felt that, in Fresno, the teaching staff is biased toward keeping the student passive in the educational process. The above theoretical base should be used to change teachers' attitudes toward students. It is strongly suggested that a staff development program be instituted to provide detail on this learning theory and to promote desirable changes in the educational program. (LN)

Available

Best Copy

EA 002 836

ED038757

EDUCATIONAL NEEDS

18. TEACHING/LEARNING PROCESSES

FRESNO, 1968

INSTRUCTIONAL MATERIALS CENTER
FRESNO CITY UNIFIED SCHOOL DISTRICT

FRESNO CITY UNIFIED SCHOOL DISTRICT

1968

Board of Education

Ann M. Leavenworth, Ph.D., president
William C. Meux, clerk
William Dienstein, Ph.D., member
H. M. Ginsburg, M.D., member
J. E. Young, M.D., member

Administrative Staff

Erwin A. Dann, superintendent
Reid W. Gromis, assistant superintendent - personnel
Robert S. Miner, assistant superintendent - instruction
Dr. Robert A. Webber, assistant superintendent - business
Robert A. Hansen, director - planning and research
Dr. M. Marty Santigian, director - information services and human relations

Project Staff

Dr. Edward E. Hawkins, project director
William P. Booth, coordinator of research and evaluation
Larry Matthews, research assistant
Dr. Louise R. Pierce, research assistant
Dr. Richard Sparks, editing consultant
Richard M. Mallory, editing
Alan E. Lubic, editing

The work presented or reported herein was performed pursuant to a Grant from the U. S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U. S. Office of Education, and no official endorsement by the U. S. Office of Education should be inferred.

ED038757

/18. TEACHING/LEARNING PROCESS

Dr. Donald H. De Lay

Olan L. Knight

David Nyberg

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Sad copy

F O R E W O R D

PROJECT DESIGN (Inter-Agency Planning for Urban Educational Needs) was organized as a two-year project to develop a comprehensive long-range master plan of education for the Fresno City Unified School District in California.

This project was conceived by school leadership to bring under one umbrella current major problems of the schools, the relationship of the schools to the broader community, the impact of educational change now occurring throughout the nation, and a fresh view of the educational needs, goals and aspirations of our youth and adults. The ultimate purpose of the project is to weld into an integrated plan the best use of available resources to meet the totality of current and projected needs according to their rational priorities.

The United States Office of Education funded the proposal as an exemplary Title III project, recognizing the urgency for developing better planning processes for urban school systems. The first year of this project was organized to assess current and projected educational needs in the urban area served by the Fresno City Schools. Planning procedures will be carried out in the second project year.

A major dimension of the Needs Assessment is an analysis of educational and urban factors by a Task Force of specialists. This report is one of the Task Force Needs Assessment publication series. See the inside back cover for the complete list of project Needs Assessment publications.

DONALD H. DE LAY

Director Teaching/Learning Process

Dr. De Lay was raised and educated in the Northwest, principally, Portland, Oregon. He received his B.S. degree from Oregon State University in 1950 and his M.S. degree at the University of Oregon in 1954, with an emphasis on administration. While completing work for the Masters degree, he was gaining practical experience through his activities in the Union High School at Monroe, Oregon where he progressed from teacher to principal to superintendent.

At Portland, he gained further background from his work as Activity Director at Jefferson High School, and later vice-principal at Lincoln High School. Prior to moving to Stanford, he helped to design and implement an experimental project in the use of computers for education in the district.

At Stanford, Dr. De Lay earned his Doctorate with a major emphasis in teacher education and secondary curriculum. Upon completion of his work for the Doctorate he was asked to remain on the Stanford staff to work with Dr. Robert Bush and Dr. Dwight Allen as director of a curriculum study and flexible scheduling project. He was responsible for the field implementation of the major innovations derived from that study. During this time the scheduling project involved approximately two hundred schools located throughout the United States and Japan. Well over one hundred of the project schools were actually reorganized through staff training and use of computer based procedures -- an indication of Dr. De Lay's considerable experience in working with a variety of staff situations.

In addition to his fieldwork, Dr. De Lay initiated and directed a research project in small group instruction at the Center for Research and Development in Teaching at Stanford University.

As a result of his work in implementing educational innovations, Dr. De Lay has been in demand as a speaker and director of teacher and administrator workshops. In association with Dwight Allen, he has also directed several educational surveys and feasibility studies for computer applications.

OLAN L. KNIGHT

Consultant Teaching/Learning Process

Subsequent to receiving his B. S. and M. A. degrees in Education from the University of Oklahoma in 1949 and 1950, Mr. Knight became an instructor to Army officers in Marxist Dialecticism and Communist Propaganda. During this tour of military duty Mr. Knight also attended the Army Language School in Monterey, California and became an Interpretor of Japanese Language. While working in Japan as a Chemical Researcher and an Interrogator-interpretor of Japanese, he accepted a secondary teaching position for the Overseas Schools of American Dependents. In two years he became an Assistant Principal, and a year later, Principal, followed by an appointment as Superintendent of the Department of Defense Schools in Kyushu. At the same time he held an appointment as an Assistant Professor of Japanese and the Philosophy of Education for the Far East Division of the University of Maryland.

In addition to his school administration duties, Mr. Knight worked as the United States Air Force representative to the Japanese Government in matters pertaining to education. He was a representative in the same capacity to the American Consulate and to the American Cultural Center.

Since 1966, Mr. Knight has been working with Dr. Dwight W. Allen and Dr. Donald De Lay on the Stanford School Scheduling System (Flexible Scheduling) as a consultant to schools across the United States. With Dr. De Lay he developed a manual operation for flexible scheduling without the assistance of the computer.

Mr. Knight is presently working on a doctoral dissertation at Stanford dealing with the interrelations of student attitudes and instructional designs.

DAVID NYBERG

Consultant Teaching/Learning Process

Mr. Nyberg credits himself with an informal degree in People Watching, and undocumented degrees in American and European literature. Stanford University credits him with an A. B. in psychology. His personal experience has provoked formal studies in college student marriage, academic anxiety and fear of failure as a life style in America.

He has done research at the Institute for Advanced Study in the Behavioral Sciences (psycholinguistics), the Institute for the Study of Human Problems (personality development), the Institute for Research in Hypnosis (methods and susceptibility, pain tolerance), and the Center for Research and Development in Teaching (small group instruction).

He does not admit to any teaching experience, but he has bewildered a number of students on the topics of contemporary education, the psychology of education, the philosophy of education, and modern American poetry.

At Davis-MacConnell-Ralston, Inc., Mr. Nyberg acts in the capacity of small group facilitator, assessor of teacher/learner situations, propagandist and thorn. His most recent writings include articles on the use of CRAM (Comprehensive Random Achievement Monitor) as a teaching method (co-authored by Don De Lay), a comparison of John Dewey and Albert Camus in reference to the context and quality of thought, and a theoretical case for indeterminacy as a basis for teaching and learning.

He is now at work on a Ph.D. thesis tentatively entitled "The Philosophy of Humanistic Psychology".

TABLE OF CONTENTS

Propaedeutics of a Learning Theory 1

Bases for Learning 2

Student Selection 3

Active Involvement 3

Inquiry 4

Intrinsic Reward 4

Self-Esteem 6

Examples of the Theory in a School Setting 7

Summary of Survey Data

Student Opinion Scale 10

Student Selection 10

Active Involvement 11

Inquiry 11

Intrinsic Reward 11

Self-Esteem 12

35 MM Time Lapse Study 13

Classroom Observation 14

Teacher Opinion Scales 15

Teacher Interviews 16

Review and Recommendations 17

Appendix

Student Opinion Scale Summary Data 23

Teacher Opinion Scales 43

Major Conclusions Identified by Project Staff 51

PROPAEDEUTICS OF A LEARNING THEORY

In the fourteenth century, before books became an available public commodity, scholars stood before large crowds of students reading from manuscript scrolls. The students were expected to menorize what they heard. In the twentieth century we have available not only all the books that we could possible read in a lifetime, but an incredibly rich resource of other media and travel opportunities as well; yet our teachers still stand in front of large crowds of students and read from scrolls (albeit being somewhat more up-to-date). The students are still expected to memorize what they hear. In six hundred years there have been a few relatively brief flurries of concern about how people learn, but the basic and ancient model of lecture-memorize-test is still, incredibly enough, accepted as <u>the</u> way.

Classrooms are so far out of step with what is going on in the world outside (a discrepancy with which every student and teacher is familiar) that they have virtually become halls for an habitual conformity game. A child learns from his elders to play the School Game in order to dissipate fear -- fear of parent and teacher and teacher reprisal, peer ridicule, some sort of abstract failure to keep within the horizontal blue lines and the vertical red line margins, and most sad of all, fear of making a mistake (which is to say, in many cases, being inventive). It is this sort of reprehensible adult behavior that provoked Alfred Adler to define education as "the process of transferring the notes of the teacher to the notebook of the pupil without passing through the head of either." He was joined in his outrage by Albert Einstein who quipped that "Education is <u>what's left</u> when you have forgotten everything you learned in school."

It would be frighteningly easy to go on deriding the traditions of institutionalized education in this country, but the more important task is formulating a sound basis for providing significant improvement in the learning opportunities for our children. We cannot improve education without changing it, and we are reluctant to begin because changing always involves a risk. Given the state of education now, however, we would consider the refusal to risk a gross irresponsibility for it would mean perpetuating a situation which is approaching its final limits of tolerability. Six hundred years is enough time for caution.

Our concern is for human beings. Our basic assumption underlying all that follows in this paper is that schools abound with good people who really want to do a better job of helping students, who really care about their work and who are willing to spend the vast amount of energy necessary for breaking through into improvement. If we could not believe this, we would have no reason for hope at all.

BASES FOR LEARNING

There have been hundreds of statements made about what the purpose of school is; to us, the best one is simply to help students want to learn. What we mean by learning is a change in personal behavior of which the person is aware. It seems at least redundant, if not naive, to say that, yet many schools operate as if learning were a function of information accumulation alone. Learning, in our opinion, is a product of two functions: acquiring information, and more importantly, discovering and developing personal meaning. It is the combination of information plus its personal meaning to the learner that creates a behavioral change.

Learning = Information + Personal Meaning ⟶ Behavioral Change

Too often formal learning is artificially terminated by tests at the informational level. The behavioral change resulting from information digestion of this nature comes in the form of finger movement on a test paper. Any first year algebra student can tell you how fast this imprint of "learning" fades, how significant it remains to him. If we are serious about improving schools, we must look carefully at what we believe about learning, for we cannot make a case for change based on any other premise.

For the most part, learning is a unique, lonesome, personal process. The number of variances that exist in one human being, let alone among a whole group of people, is fantastic. These variances in multiple combinations account for differences in the ways people learn. It follows that if we want to be as effective as we can in facilitating learning, we cannot afford to ignore individual differences. To "individualize instruction" seems to us a valid and desirable goal. We are astonished, however, at the frequency of its verbalization contrasted with the paucity of its practice. We seem to find comfort in talking about better things, good things, even though we haven't the courage to do them.

Just as we tend to fear the unknown, change of any sort, we also tend to avoid personal matters. Yet learning is a personal matter. We push ourselves to find ways of dealing with the ambiguous, and of overcoming our fear of approaching people on a personal, individual level -- the level at which we find significant personal meaning.

Before getting into the more detailed elements of learning, we would like to mention the importance of the ethos or context in which learning takes place. Currently most of our schools are fashioned after military or penal models which are basically control-oriented. The assumption is that persons within the confines of the institution need control because they are untrustworthy. This attitude is, to say the least, not conducive to inventive, risky, highly personalized behavior, which is to say, learning.

In order for the kind of learning that we are talking about to take place in the school, the institution must be operated in such a way as to convince teachers and students that their learning and independence is more important than their control. If this atmosphere is not created by the administration, whatever attempts we make to improve learning will be crushed into insignificance. Personal meaning cannot flourish in a tightly controlled, mistrustful context which does not allow for ambiguity and surprise.

Student Selection

We cannot imagine anything more restrictive for a learner than to be given alternatives of only token dimensions (e.g.,between A and a), or to be given no choice at all. It is important that a teacher provide as broad an array of alternatives as possible at every juncture of learning for every student. This is no small task; in fact, it is a lot of work. What is really important, however, is that the learner feels he has the right to select what he wants to learn, how and when he wants to learn it. The teacher's job here is to provide the alternatives and to help the student ferret out the probable consequences he will face once he begins acting on his choice. In this way the student takes responsibility (or at least shares it with the teacher) for what he does, for what he wants to do. This is a much different form of behavior than following rules and assignments against one's wishes. Alternatives are important, but student selection is vital for allowing learning to become a personal process.

Active Involvement

We believe that it is not what you put into a student through his hearing apparatus but what you get out of him through various behaviors that makes the difference in learning. To require a student to sit passively absorbing (or ignoring) teacher-talk is to encourage all forms of passive, nonproductive, sedentary behavior. Learning is essentially an active process, a behavior change. Sitting quietly, listening dutifully is passive and, therefore, a deterrent to learning as we have defined it. Personal meaning cannot evolve when a person is not involved in what is going on around him. It is difficult to be involved when not allowed to be active; without involvement choice is irrelevant. The only thing you can get out of a passive sponge is what you allow it to soak up, and you generally have to squeeze pretty hard to get back what you already had. The sponge, by the way, is left empty again.

One of the most fundamental skills that we want our graduates to have is verbal dexterity -- the ability to handle thoughts in terms of words. We want them to learn how to talk. Why then have teacher talking and student quietude become the core elements of teaching? How can we expect a student to learn how to talk when we are forever telling him to be quiet? We estimate that about 80% of teacher-talk has a negative effect on learning. It disallows active involvement on the part of the learner.

Inquiry

The power for learning resides in keeping questions open. A rhetoric of conclusions presented in rapid fire machine-gun style does not lend itself to provoking inquiring behavior in students. In fact, it tends to deaden curiosity. It seems to us that we should rather be encouraging curiosity in learners by raising questions, for it is in the search for answers (or further questions) by the learner that learning takes place. Learning is an inquiring process. It is obvious that all available knowledge or information cannot possibly be presented to students -- there is too much of it and it changes too rapidly. It would be much more to the point if we were to help equip students with the necessary tools for inquiry so they would learn to deal with change per se, and so they could search out their own meanings in terms of their own interests.

Intrinsic Reward

Perhaps the most talked about issue in learning today is reinforcement or reward. Education is being inundated with a mass of commercially prepared material that is based on the simplistic notion that information properly defined, segmented, and sequenced (programmed) can be "learned" more efficiently. The principal idea behind this kind of programmed material is immediate reinforcement, i.e.,the learner is reinforced after each frame or segment of the program. This reinforcement or reward can be anything from a "Correct" to a smile to a jellybean, and the process seems to be equally effective with pigeons or people (although pigeons do prefer corn). When properly used, this reinforcement schedule is a powerful adjunct to learning. Most often, however, it is directed at informational levels and seldom does it have any relation to meaning. It seems to us that this issue could stand a revaluation; teachers have better things to do than act as "teenage reinforcement agents" with their pockets full of jellybeans, corn or smiles.

Our most critical objection to this type of reward system is that the learner perceives it as extrinsic to himself. This is also true of the most common reward in education, namely grades. Extrinsically perceived rewards tend to separate and barricade the learner from the subject and the person directing the process and issuing the rewards. This may explain, in part, the need for control of students in most schools. It seems ironic that the most common rewards by educators predictably drive students away from learning.

Sometime ago one of the authors (Don De Lay) devised a plan* to monitor student progress on a continuous basis throughout the duration of a course. The idea was to give a rather short test which represented a sample of the entire curriculum of the course several times during the semester.

---

*CRAM: Comprehensive Random Achievement Monitor

By sampling responses to the material by different students at randomized intervals, he was able to monitor the progress of each student and the entire class in terms of the final course objectives. All the tests were "finals" in a sense, and they were never announced ahead of time. No one knew when they would be taking what form of the test. The initial response to this infringement of the rules of the game was silent and vocal disapproval, in some cases real anger. For several weeks hostility was evident but gradually subsiding. The tests were always returned and never graded; the only marks were small checks on items the student seemed confused about. As the course progressed students began to realize that they were not being evaluated; moreover, the test procedure let them know how they were progressing, where they were weak, what they already knew, and it gave them some idea of what they might like to pursue next. Students began to request the test rather than object to it. Here, perceptions of the same test given to the same students under the same conditions were reversed from "an extrinsic evaluation" to "an intrinsic feedback" -- or knowledge of results toward the learner's own selected goals. We think Carl Rogers was right in saying that "evaluation destroys communication"; when evaluation was eliminated, communication improved between the teacher and the students, and among the students themselves. We are certain that personal communication is intimately related to learning.

When a student feels that he is being assisted by knowing his own progress toward his own goals, he soon assumes an attitude of wanting to know and even enjoying the process of inquiry. The results of feedback can lead to the intrinsic joy of learning for its own sake, which in turn leads to the ultimate goal of our teaching: to become unnecessary. Learning is a continuous life-long process. To become a "learning person," one must consciously pursue learning with zest and be comfortable in an indeterminate, ever changing, exciting world.

In our efforts to sort out and be efficient with student feedback, we run the danger of losing the important human element of concern. We have never met a human being who did not respond to what he perceived as authentic, spontaneous concern about his progress or well-being from a significant other. It is this authentic human warmth of real concern which transposes feedback from something that is merely important to something that is really powerful. It is extremely important that teachers lower their "stranger level" with students -- risk really knowing students as persons. This is the heart of the process of human feedback which raises learning to a personalized level. The ultimate evil in teaching is to insulate oneself from students by abstracting them into objects, for every student knows that he really exists right there in the "here and now," and his is a very personal, concrete existence.

Self-Esteem

There is a great deal of evidence supporting the notion that the way a teacher feels about his students and the way the student feels about himself is of critical importance for learning. When a teacher expects a student's achievement level to be high, the student's achievement level tends to be high. When students are convinced that they can learn, and that others (namely the teacher) also are convinced that they can learn, they in fact do learn. Conversely, when neither teacher nor student is confident that a task can be done well, the task probably will not be done well.*

It is extremely important that teachers believe in their students and that this belief be open enough to be perceived by the student. Expectations of the teacher and of the student tend to be fulfilled. Positive self-esteem is a requisite for learning. G. B. Shaw said it best in the last scene of Pygmalion:

> . . . . the difference between a lady and a flower girl is not how she behaves, but how she's treated. I shall always be a flower girl to Professor Higgins, because he always treats me as a flower girl, and always will; but I know I can be a lady to you, because you always treat me as a lady, and always will.

All teachers need to answer the question, "Do I treat my students as flower girls or ladies?" The answer may well hold the key to their success.

In a sense, we have dissected learning into five parts in order to more clearly define each function. The learning process exists however, as a complete experience with all its parts in motion, flowing as part of the living person. Our segmented treatment only points to the trivial amount of knowledge that we have about people, especially about how they learn. So, admitting a delicate balance of philosophical, psychological and sociological assumptions, we have tried to establish a conceptual perspective which a person in all his uniqueness can apply to his own context with all its particular limitations. Each person must first commit himself to some position in learning he believes in and then he must do something about it. As a person shifts from an intellectual commitment to a behavioral commitment, experiencing with other persons, then the refinement process of experiential learning can begin.

---

*Rosenthal, R. and Jacobson, L. Pygmalion in the Classroom. New York: Holt, Rinehart and Winston, 1968.

EXAMPLES OF THE THEORY IN A SCHOOL SETTING

Such an illusive, indeterminate, personal, changing position in learning is impossible to reduce to a concrete model. The best we can do at this point is to offer some examples of how these concepts might be applied in learning situations.

The whole process begins with a respect for individual differences, in students and in teachers. The two main facets of differences we are concerned with here are interest and rate of progress. If we want to allow a student to act on his interests at his own pace, the teacher has a responsibility to present an environment which provides desirable and reasonable choices for each student. That is to say, the teacher's first job as the class begins is to present all the material (say in a mineographed outline form) he wishes to deal with, encouraging the students to decide how they want to get into it. This material must be a product of the teacher's own interests and feelings of competence. This is important, in our view, because the feelings a teacher has about what he is doing transfers along with information: if the teacher is enthusiastic, the chance of a student becoming enthusiastic also is increased. It is difficult to be enthusiastic about something one is not interested in; therefore, teachers should teach what they want to teach. Anything that jeopardizes a student's interest in learning is a travesty. A bored teacher, or a hypocritical one is a travesty.

With interest and enthusiasm come comfort and intimacy -- involvement. How these elements develop and merge is a personal matter. A teacher cannot expect his students to follow his involvement pattern, rather he must allow for divergent patterns to emerge. This sort of indeterminacy is easier to bear when one is essentially "at home" with what one is doing, and this sort of indeterminacy is essential to bear if choice is to be allowed. Once the teacher is freed from strictly informational concerns, when he is teaching what he feels comfortable with, he will be able to devote more energy and time to personalizing instruction.

One way to handle informational concerns is through the large group instruction mode which allows hundreds of students to share one teacher at his best. In this instance, all students taking a certain class (say English III) can be scheduled to hear a lecture on Keats by the faculty member whose special interest is Keats. The idea here is to present a limited amount of material with the intention of making a high-interest impact. This can best be done by someone who has a high level of interest in the material. The purpose is not to provide answers or to "cover" a unit, but to raise questions and to encourage inquiry. Large group presentations do not represent learning directly; it is only in students' use of the ideas and information presented that learning occurs. Large group presentations are helpful in starting individual processes of learning.

Personal meaning can perhaps best be explored through small group processes. In this situation ten to fifteen students meet with their teacher in an atmosphere which must be established in the open as nonevaluative, free-flowing and self-governing. Only in these circumstances will the membership phenomenon occur. This phenomenon is not mysterious or mystical; it is, rather, a normal consequence of extended face-to-face contact. It indicates strongly that, given the chance, people would rather talk with each other meaningfully and openly than peripherally and defensively. If circumstances are not threatening, communicative interaction will transcend formal information exchange to levels of personal meaning, mutual support and sharing. At this juncture students and teachers cannot play games; they must be themselves. It is a valuable learning experience to present a meaningful idea of one's own to peers and adults who will respond in honest and unpredictable ways. A situation of trust and nonevaluation makes this experience possible to the extent that fear of self-expression is reduced. The phenomenon of group membership is critical in this process: as people begin to share their knowledge and feelings, stranger levels go way down and personal risk levels go way up until mutual support and concern are realized through membership acceptance. As the membership occurs group life becomes increasingly open, free and functional.

As this phenomenon is manifested, the sensitive teacher will recognize a great wealth of data to aid his efforts in personalizing his learning assistance. An ever increasing number of secure and open teachers are finding the joy of really knowing their students through this experience which enables them to perform at their highest and most rewarding levels of competence and concern.

It is important to remember that the difference between large group instruction and small group instruction is not the number of students present, but what happens to them. A teacher can "present" to 500 students or to one student: it is always large group instruction if the teacher dominates the presentation. Teachers must be careful of subconscious or habitual dominance, and they must be vigilant in remaining open so that students may develop in their own personal ways. We consider the ability to allow a group of students to form an open and flowing communication one of the highest forms of human competency.

Assuming that students understand their new performance roles and that teachers and students know each other, the sensitive and aware teacher can begin to respond on a personal level to student behavior as it manifests interests and needs. For this to be possible, the school atmosphere, or ethos, must be perceived by the student as open-autonomous; that is, he must perceive his own freedom and responsibility in pursuing goals that he can choose. Under these circumstances, the emergence of an independent, productive learner is predictable.

The curriculum could be produced from the interaction between students and teacher, from the autonomous use of independent time, and from the scope and range of personal interests. It is critical that there be no forced connection between teacher presentation and student work if our efforts are to be directed toward awakening and expanding interests, rather than directing and whittling them.

A further word about student independence is in order, for at any given time in any course any student will be somewhere between the two extremes of needing a great deal of personal help and needing to be left completely alone. It is very important to continually remind oneself that people change constantly and rapidly. A teacher must be sensitive to these changes in others if he is to respond spontaneously, authentically, and helpfully.

It is well and good to describe a few potentials in a personalized learning situation, but the heart of the matter rests with the ability of the adult helpers (teachers) to change continuously. Each learner must be provided a constantly changing and expanding range of choices from which to select. Students must be made vividly aware of their own responsibility in learning, that their performance is valued, and that learning is an active process. A narrative of inquiry must be initiated and every effort must be given to keep this personal inquiry open -- terminating functions must be minimized. Adults in a school must be authentically concerned with students enough to keep each student personally aware of his progress toward his own goals in an atmosphere of intrinsic reward. Above all, the student must be afforded dignity; he must know that adults and peers believe in him so he may believe in himself, and develop self-esteem.

These are different and difficult roles for adults in a school. On the other hand, it seems feasible that the personal energy needed to personalize a school may be far less taxing and much more rewarding than the effort needed to control a school. For example, it may be possible to stop trying to motivate students by doing something to them and replace this function with attempts to win consent, something students give. Rather than control all students at all times, perhaps we should only control the very few who prove they need it and release the vast majority of students who really intend to do what is necessary to succeed. The traditional adult role in "learning" -- giving to the student what the adult wants him to get and then taking back what the adult wants to prove the student got it -- may be reversed so the student gives what he wants to the teacher and takes what he wants from the teacher. The curriculum, rather than being restricted, could be expanded by the students. If fear of grades, reprisal and the "permanent record" were eliminated, authentic mutual trust could become a prominent characteristic of the school atmosphere.

School presently is a "game" for most students; if the incent for playing at the game were removed, the potential for a warm human atmosphere to exist would become real. Then students would have good

reason to give of themselves, to risk the unknown in learning, and to enjoy the whole process. Moreover, we believe that the vast majority of adults in public education are able and willing to risk themselves and give of their own energy to provide a better opportunity for children to really learn to learn.

SUMMARY OF SURVEY DATA

STUDENT OPINION SCALE*

The following data were collected from a random selection of classes in four high schools and five junior high schools. Sample N = 459 (197 HS, 262 JHS). We have chosen to examine the data in terms of the five concepts discussed in the previous section of this report: student selection, active involvement, inquiry, intrinsic reward and self-esteem.

Student Selection

Question #7 was aimed specifically at this concept in terms of classroom behavior, not in course selection or registration. Forty-six percent of the high school students said they could select what they wanted to do less than half of the time; 40% said they could never make their own selections. On the junior high level the figures run parallel: 41% sometime (less than half of the time), and 31% never. It is interesting to note that choice in the classroom diminishes with educational level. It seems ironic that high school students feel less free to select activities in the classroom than do junior high school students. Over-all, 78% of the students surveyed do not have a significant opportunity to make their own choices in class.

Two other questions (#16 and #18) relate to this concept. Fifty-one percent of all students say that from half to none of what they learn in school will be helpful to them in the real world, (Question 16). Whether or not this is an accurate perception on their part is questionable, but their feeling on the matter bears significance on the learning that takes place. It is difficult to apply oneself to what is perceived as worthless. About one third of the students "turn the teacher off" from half to most of the time in class. The indication here is that the lack of opportunity to choose leads to a good deal of wasted time and effort for both teachers and students: a large percentage of the students cannot keep their minds on what is going on because it is irrelevant to them.

---

*See Appendix I

Active Involvement

As was pointed out above, when the teacher is talking, the student is passive and consequently not really involved in what is going on. Forty percent of the high school students say that teachers talk for more than 90% of class time. The figure is 21% in junior high schools. Over-all 76% say that teachers talk from 50% to 100% of the time, (Question 1). Again we note the decline in activity with the rising educational level. The number of students who consider their classes "dull" to "very boring" goes up from 37% in the JHS to 46% in HS, (Question 2). These figures are alarmingly high, but not surprising considering the amount of passive listening expected of students.

Some 81% of all students feel that they are free to express opinions at least some of the time (Question 5). But considering the 86% who report that less than 20% of class time is used in discussion or in expressing their own thoughts, one must ask if students are allowed to express themselves, (Question 3). They certainly do not appear to be encouraged in that direction.

One more indication that active involvement plays a subordinate role in the classroom is that 51% of the students say teachers spend from half to most of their time in needless repetition, (Question 17). This makes it difficult even to be a relatively active listener.

Inquiry

This issue is basically a question of relevance. Inquiry does not occur when one is not free to choose what one wants to pursue, nor does it occur when one is not allowed to be active. Inquiry is acting on a choice; it is following up one's interests. As we have seen above, the two necessary conditions for inquiry are not present for a great percentage of students; therefore, inquiry is near to being impossible in the classroom. One is simply not disinterested in one's own interests and we have seen that from one third to one half of the students are bored in class, that less than 20% of class time is spent discussing students' opinions, and that half the students feel that what they do in school is not related to what goes on in the real world. Since inquiry is a matter of interest and relevance, we conclude that inquiry is not an integral part of the learning situation for most of the students surveyed.

Intrinsic Reward

More than fifty-two years ago John Dewey wrote in *Democracy and Education*:

> . . . . in education, we have that systematic depreciation of interest . . . plus the necessity in practice, with most pupils, of recourse to extraneous and irrelevant rewards and penalties in order to induce the person who has a mind to apply that mind to the truths to be known. Thus we have the spectacle of professional educators decrying appeal to interest while they uphold with great dignity the need of reliance upon examinations, marks, promotions and emotions, prizes, and the time-honored paraphernalia of rewards and punishments.

This concept of intrinsic reward is closely related to the elements and conditions of inquiry: selection, interest, relevance. These conditions have already been discussed above though they apply equally here. Question 9 provided some disappointing data about "playing the game of school," i.e.,dickering for rewards in order to avoid punishments; in short, pleasing the teacher. Thirty percent of all students said that from most to all teachers expect agreement as a fair exchange for a good mark. Less than half felt that their grades would not be effected if they said what they felt. In relation to the personal feedback described in the first section of this report we found that 55% of all students say that teachers do not always (half the time to never) listen to their opinions or respond in such a way to show that their opinions "count," (Question 6). This would suggest that about half of the students are not getting personal feedback while it is certain that they are being evaluated by exam grades. This is equivalent to saying that extrinsic rewards are more prevalent than intrinsic rewards for at least 55% of the students who responded.

Self-Esteem

Earlier we referred to the Rosenthal and Jacobson study on the self-fulfilling prophecy in which the authors showed that people (children in this case) behave in such a way as to fulfill the expectations others have of them. If we wish to encourage the development of self-esteem, an element of learning which we feel is essential, then we must demonstrate concern, respect and high expectations. We must be perceived by the learner as caring and confident for his success. We shall let the results of the questionnaire speak for themselves:

Question 6 If you do voice your opinion, would you say the teacher "really" listens, and what you have said "counts?"

A.	Yes	45%
B.	Half and half	28
C.	Some of the time	19
D.	No	7

Question 8 Do you receive individual attention from your teachers?

A.	Always when I need it	41%
B.	About half the time when I need it	19
C.	Some of the time	29
D.	Never	11

Question 10 Do your teachers really "care" about you as a person?

A.	Almost all of them	32%
B.	Some of them do	43
C.	Very few really do	20
D.	None of them do	4

These responses, coupled with the item about playing the game of school, indicate that more than half of the students are not held in very high esteem by their teachers. When a student feels that what he says does not "count," that teachers do not pay attention to him on a personal level, and that teachers do not really care about him as a person, one might expect the student to hold himself in low esteem, lose any intrinsic motivation he might have had, and lose interest in continuing to "fail" in this manner. Another likely reaction is to discredit the witness, begin to dislike and mistrust the teacher because he fails to see the good which is there. Neither of these reactions is conducive to learning.

Self-esteem is a product of social interaction and it is generally developed along lines of acceptance or non-acceptance. It is not likely that a student will come to accept a person (or the institution he represents) if he does not feel accepted by that person. Our data indicate that the question of acceptance and self-esteem is a very important one for more than half of the students represented by our sample.

Some of the SOS items are not represented in this discussion; however, responses to all the items may be found in Appendix I. (Note: percentages were rounded to the nearest whole integer; thus, in a few cases the figures do not sum to 100.)

35MM TIME LAPSE STUDY

This segment of the assessment procedure was designed to obtain a visual record of student behavior in the classroom. It consists of actual photographs of the students taken every ninety seconds throughout the classroom period (55 minutes average). Each photograph was interpreted by independent raters (rater reliability = .89) into six instructional design categories: 1) Presentation, 2) Student Interaction, 3) Study Hall, 4) Laboratory/Independent Study, 5) Testing, 6) Non-directed Activity.

Instructional Design	JHS	HS	Total
Presentation	52.2%	49.3%	50.7%
Student Interaction	-0-	-0-	-0-
Study Hall	35.6	35.1	35.3
Laboratory/Independent Study	-0-	14.1	7.0
Testing	11.6	-0-	5.8
Non-directed Activity	0.1	1.4	0.7

NOTE: There was a conscious effort to avoid testing situations. Scheduled laboratories were not included in the randomization. The classes studied were generally selected by the principals of the participating schools.

These data support the student questionnaire responses discussed above. The most glaring point to be made is that students do not interact with each other, nor do they act under self-direction. Most of the time they either sit and listen or sit and study their homework. One might question the use of professional time and resources if in fact teachers preside over study hall situations for 35% of class time. One might also question whether any efforts are being made to develop self-direction, responsibility, personal levels of meaning, positive self-esteem or active involvement if students are lectured to or are writing assignments for 85% of the time they spend in class.

CLASSROOM OBSERVATION

We looked at and listened in on approximately 100 elementary classrooms and 100 high school and junior high school classrooms. During a given hour of class we walked through the entire school under observation, stopping at each classroom to get an impression of what was going on. When doors were closed and windows inaccessible, we did not intrude so we missed a few of the classes, but these cases were rare. We picked the class hour at random to provide as valid a sample as possible under the existing conditions. We categorized our observations in the following manner:

	Elementary	HS/JHS
Teacher talking	61%	70%
Study hall in class	20	21
Audio-visual presentation	9	0
Laboratory activity	3	0
Non-directed free time	3	2
Student interaction (discussion)	4	7

Again the pattern is obvious: most of the time either the teacher is talking and the students are silent, or everybody is silent. If in fact one of the fundamental skills we wish to help students to develop is verbal ability, the ability to handle ideas, to communicate with others, then why is the teacher the only one who gets any practice? Presumably, the teacher already knows how to talk: it is the students who need to develop the skill. This particular skill development is either not an aim of the schools we visited, or if it is, it is being fundamentally and persistently ignored.

TEACHER OPINION SCALES*

We asked for volunteers to respond to the semantic differential at every school we visited. Fifty-five teachers responded (37 JHS and 18 HS). The instrument consisted of seven lists of adjectival opposites, each list pertaining to one area: My Teaching, The School Board, District Personnel Policies, My Students, Central Office Staff, Fellow Teachers, and This School District. The teachers were asked to respond quickly on a "first reaction" basis to each of the items. We told them they would remain anonymous and that we were interested in their honest feelings about the seven areas included in the instrument.

The data provided by this type of measurement procedure is best understood in terms of a <u>profile</u> rather than in terms of individual items. Since there was virtually no difference between JHS and HS teachers, and a startling similarity among all teachers, we have provided a mean profile for the total sample.

There are, we feel, three significant things to say about these profiles. In the first place, we noticed the extremely unusual circumstance that (except for two minor breaches) literally no one had any negative opinions or feelings about anything. The second obvious pattern was that the ability or desire to respond at all with a personal opinion diminished in the following order:

Self
Students
Other teachers

School Board
District
District personnel policies
Central office staff

*See Appendix II

The broken line indicates the split between some opinion and no opinion. The teachers in our sample were inhibited either by ignorance or fear when asked to respond with an opinion about the educational milieu outside of their classrooms and coffee rooms.

The last point to be made is essentially an objective summary statement. The semantic differential indicates a very neutral reaction by teachers to all dimensions outside the classroom which is generally a characteristic of threatened, scared or uncommitted personnel. The teachers seem to view their own teaching and students in a positive acceptable vein. (It might be interesting at this point to compare what the students had to say about teacher attitudes and opinions of them as we reported above.)

TEACHER INTERVIEWS

The survey team interviewed 45 teachers and 5 administrators on the JHS and HS levels. These interviews were voluntary and informal, usually conducted over coffee in the lounge. We did not ask for "interviews" when we approached teachers, we rather asked if we might "talk with them about what was going on in the school." No notes were taken during the conversations, and no pressure was applied to get responses to the questions we asked. We tried to keep our contacts with teachers as candid and informal as they themselves would allow in order to eliminate any overtones of intimidation. Basically, we covered six questions. These issues and the most prevalent (in many instances the unanimous) responses are outlined below.

1. Since a teacher's business is teaching, we asked the question, "How do you teach?" In all but one case, the response was reducible to the basic form of show and tell, or lecture/presentation. The one exception was a teacher at Edison High School who saw a need for the greatest possible variety of approaches because talking <u>at</u> the students, in this teacher's view, really means talking to oneself.

2. Since it is a reasonable expectation that a professional would have sound reasons for doing what he does, we asked the question, "Why do you teach like that?" Most teachers were surprised by the question, which surprised us. With eyebrows arched they told us that was the way to cover content, and further, that was the way they themselves were taught. The assumption seemed to be that students were not motivated; therefore, the teacher had to control the movement of the class via scheduled lectures so that all the material would get exposed. The exceptional teacher mentioned above said that a variety of methods was important because of the great variety of student needs which had to be recognized.

3. Since the business of teaching is the promotion of learning, we asked the question, "What do you think is most important in learning?" Many of the teachers avoided this question altogether; those who did venture a response talked of homework and grades. Not a single teacher or administrator gave a response that was in any way related to or justifiable by a theory of learning. We concluded that none were

familiar with contemporary literature on learning and that none had been influenced by it.

4. Alluding to the notions presented in the first section of this report we asked the question, "What do you think of giving students open time for individual work?" We were encouraged by a preponderance of responses favorable to the idea. Less than half said that control was more important than independence.

5. The next obvious question was, "Do you now give your students open time?" Paradoxically, only three said they did. Either those who said they were supportive of the idea did not really mean it, or they felt forbidden to employ it. We thought it odd that a teacher would not use an idea or method which he considered good.

6. Considering the de facto segregation evident in the city we asked the question, "What would you think of balancing the racial proportions in your school?" The immediate response was predictable. They said yes, it would be good. The more reflective response was also predictable. They said no, because it will lower the effectiveness and efficiency of the school. There was evident, among the majority, a genuine concern for the educational progress of the white student. On the West Side, there was an equally genuine concern for the educational progress of the non-white student.

REVIEW AND RECOMMENDATIONS

What we now know about learning processes should convince us that substantial change is needed in education and, more particularly, in educators. Every precaution must be taken, however, to avoid the human tendency to generate new orthodoxy. Innovation and change in education must be designed as an open-ended refinement cycle, as continuous as the learning process itself. In fact, educators must learn to be comfortable with uncertainty, for in many areas little certainty exists. Moreover, by reflecting his own comfort with ambiguity, an educator may help reduce anxiety in the learner as he faces the unknown. A second temptation must be overcome, that of directing change toward objects or things rather than people. Changes in curriculum, buildings or schedules in themselves have not created significant change in learning. Real change in learning seems to center on changing teacher and student behavior.

The impact of changing things is directly related to a precedent change in human behavior. Change in education, therefore, must be focused on the teachers -- they must be able to change their role concepts and their actual behavior in the school classroom--and this focus originates from the point raised below.

Perhaps one of the most crucial, and certainly the initial concern in learning is the learner's self-concept. Before meaningful learning can take place, the learner must really believe he can learn. The environment for learning, therefore, must produce, both physically and psychologically, a glow of dignity and personal worth. To the degree that this can be established, each learner can synthesize his acquired personal, theoretical and technical knowledge into a personal style of secure dignity. It is this secure and personal knowledge that enables real change in a person's behavior to occur.

The learner must experience alternatives in the learning process. Each learner must feel that he is selecting the area and materials most important to him. The learner must feel he is actively involved in the process; the non-activity of passive listening to preselected topics must be kept to a minimum.

Learners must be tempted to explore and search for meaning; learning is a personal, inquiring process. A rhetoric of conclusions tends to close down the process of learning. The power of learning resides in the ability to keep the question open.

Continuous knowledge of progress towards known goals is a powerful reinforcer and motivator. Learning designs must include a pre-analysis of each learner and of the particular learning situation. Moreover, as goals are defined and the learner selects those goals most important for him, providing continuous feedback about the results of his efforts is essential for maintaining the process. In addition, at each juncture of the individual's learning design, a post-analysis is necessary to assure adequate data for refining the next learning phase. The key is in keeping the learner informed of his progress without evaluating it. Evaluation tends to inhibit communication. Feedback, however, tends to encourage the development of intrinsic rewards and to enhance the communication which is intimately related to learning.

Learning is a continuous human process; learning design, therefore, must reflect this open-endedness. As information becomes available through experience, the process should be refined to reflect and/or incorporate whatever changes occur. Too often, attempts to improve education have been "one shot" terminal programs. Learning opportunities for teachers, too, must be viewed as an open-ended, refining, continuous cycle. No education is ever complete.

Effective learning designs must encompass both the people and the institution in which they work. Often the tremendous power of the institution to control behavior is neglected. Some parts of the design, therefore, must be implemented and carried out in the institution where the development needs exist. Other learning experiences can best be

provided away from the institution. The balance between in-house and out-of-house exposure will always vary with the people, the institution, and the goals of the particular learning design.

Many "in-service" programs are destroyed by an "above and beyond the call of duty" expectation. Too often the vital and continuous renewal of teacher competency is relegated to after school, evenings, Saturday, or to precious and valuable summer vacation. The best way to discourage this unfairness is to give learning process training equal priority with current assignments. This places a burden on the institution's administration to find means of acquiring prime teacher time. It is predictable that the human response will more than justify the cost.

Finally, there is a more subtle element in learning which we consider quite important--personal style. Teachers are unique human beings, and this must be accounted for as they re-assess their own competencies. Personal style emerges from four basic spheres of knowledge: field and depth of expertise, use and management of technology, a theoretical position on learning, and personal meaning. As a teacher begins to gain information and experience in these four spheres of knowledge, a synthesis of his own interpretations starts to formulate a mode of behavior that we think of as a personal style.

One of the most common styles of teaching, perhaps because it is the thing most teachers have a lot of, is a content orientation. In a gross way, content style would be where a teacher with 192 graduate hours in something would attempt to get as much of this material as possible in the student's ear and out the end of his finger in the allotted time. This style tends to be cold, impersonal, rigorous, and disasterously terminal; that is, the students tend to be glad it is over.

If a content expert discovers the efficiency of technology, the result tends to increase the speed and efficiency of what he is already doing. What is increased is the ability to get more information to more students. This is all well and good, but it has little affect on the meaningfulness of the material, or on the more important issue of helping the student to like the process so he may, in fact, continue to pursue that area of knowledge.

A more integrated style level can be reached when the teacher is systematically exposed to a sound theoretical base for personalizing learning. By understanding more about human learning, the probability of increasing the effectiveness of one's use of expert knowledge and technology goes up tremendously.

Finally, a teacher who has personally experienced, and preferably is continuing to experience, a new level of personal meaning will have a much higher potential for helping other persons find personal meaning in their experiences.

Most attempts to improve teacher competency have been aimed at levels of content and technical knowledge. We submit that there seems to be little danger of these skills diminishing, and they should not--they are important. Yet, it also seems clear that the most powerful approaches to improving the way a teacher actually behaves in a classroom with students is developing personal commitment to a sound theoretical position on which to build a comfortable, open personal style.

What is the best recipe, given these ingredients? The answer will take imagination, experience, and support. These ideas, hopefully, will spark the imagination of those interested in the human functions in education. This outline is not intended to be inclusive or static. The only certainties you can count on are that nothing will happen until you start, and that real experience will serve to improve the prescribed design.

Paramount at this juncture is our plan to start. It has been our experience that detailed plans tend to belong primarily to their originator; hence, our plans would not be your plans. To effect any significant improvement, the details of a plan of action must be perceived by the staff as emanating from the staff. Communication between people and involvement in the process of change is essential to the success of any plan. We do not want to diminish the range of viable alternatives by selecting ours over yours. There are not shortcuts to major improvement: a great deal of external and internal effort is mandatory.

A typical staff development program might include the following elements:

1. The Superintendent's office would select an appropriate school staff. The initial program would start with one school, for it is essential that the learning atmosphere (ethos) of the school and the individual staff members change simultaneously. It has been our experience that significant change is not a pervasive, district-wide phenomena, but occurs individual-by-individual, school-by-school.

2. The details for implementing the staff development design would be worked out with the building principal and his key assistants, including some teachers. The program would cover one whole school year.

3. An orientation program for the entire staff for 3 or 4 days would be held in September or October. This step is essential for establishing a common base and mutual support for the year's work with individual teacher change.

4. An initial assessment of the school's instructional program is an essential first step. This baseline data is invaluable for refinement of the emerging staff development design and for effective follow-up and feedback procedures.

5. The heart of the year-long contact with the staff is the design for meaningful feedback and follow-up sessions. Our experience has been that these sessions are most effective when they are focused on from 8 to 10 teachers at a time for a 2 or 3-day period. Further, making these teachers available for 2 or 3 days without providing substitutes is a very important adjustment for the rest of the school.

6. An integral component of element five is a procedure for regular individualized assistance for teachers as they initiate changes in their teaching methods. The knowledge that there is someone who knows what they want to do, who has assisted in the formulation of their plans, who is able to provide alternatives under stress and whom they perceive as really concerned about how they are progressing is a powerful motivation for teachers to try change. Nothing can really happen until a teacher starts to do something differently: change to be real must be experienced.

7. At this juncture, it would be well to note that for administrative leadership to be effective with the school staff, these leaders must be perceived by that staff as knowledgeable about learning, i.e., being able to provide assistance with day-to-day classroom learning problems. Further, they must be thought of as secure human beings, the kind of people who are easy to talk with on meaningful issues. Third, and perhaps most important, the staff must perceive its leadership as willing to take risks, for change is a risking process and the staff will not risk change unless they perceive that same process in their immediate leadership. Therefore, it is vital that the school leadership personnel be given special help in depth with the process of learning and change.

8. A post-assessment of the instructional program would be done. Documentation of the progress made during the year by individuals and the institution itself is a requisite for refining and continuing the process of change in the following year. The measure of success, in fact, is not so much the first-year progress, but the level of change that continues for ensuing years. Real change is an open, continuous process. It is never terminal.

9. The Superintendent and his staff would initiate, simultaneously with the first year of staff development, a projection of plans for at least the next five-year period. This planning process should include strong representation from the teaching staff and all school administration offices.

The power to improve an educational system through staff development--the human dimensions--is in its longitudinal design. The goal is an updated and aware staff involved in a process of continually refining their professional competency, and producing significant changes in this competency in the form of their actual classroom behavior.

STUDENT OPINION SCALE SUMMARY DATA

1. Looking at your classes as a whole, what percentage of the classroom time would you say that the teacher is talking?

A. 10% or less B. 20-40% C. 50-75% D. 90% or more

Senior High		A	B	C	D	E **
(63)*	Bullard	0	2	37	60	
(39)	Hoover	3	15	54	26	3
(54)	Fresno	2	17	48	26	
(41)	Edison	0	15	51	34	
	Total Sr. High Percentages	1	12	46	40	1

Junior High		A	B	C	D	E
(49)*	Wawona	7	35	39	17	
(58)	Irwin	14	19	43	24	
(59)	Hamilton	2	19	61	19	
(41)	Ahwahnee	2	20	34	39	
(55)	Tenaya	4	25	55	15	
	Total Jr. High Percentages	5	26	48	21	1
	OVERALL TOTALS	3	20	47	29	1

COMMENTS:

* Number of participating students.
** Response forms had an "E" column which was occasionally marked by students although the questionnaire provided only four choices per question.

2. Again looking at your total time spent in class, how would you rate what is going on?

A. Challenging	B. Stimulating	C. Dull	D. Very Boring	
Senior High	A	B	C	D	E
Bullard	16	32	41	10	
Hoover	3	23	69	5	
Fresno	22	54	24	0	
Edison	24	37	34	5	
Total Sr. High Percentages	17	37	41	5	
Junior High	A	B	C	D	E
Wawona	24	40	21	14	
Irwin	24	48	14	14	
Hamilton	14	34	39	12	
Ahwahnee	17	39	27	17	
Tenaya	41	31	25	1	
Total Jr. High Percentages	24	37	26	11	
TOTAL JR. & SR. PERCENTAGES	21	37	32	9	

COMMENTS:

3. What percent of your time in class is spent in small groups (7-15 students) where students discuss the subject, exchanging their thoughts?

A. 60% or more	B. About 50%	C. Around 10-20%	D. Never	
Senior High	A	B	C	D	E
Bullard	0	0	14	84	2
Hoover	0	8	38	54	
Fresno	2	2	20	74	2
Edison	0	12	32	54	1
Total Sr. High Percentages	1	5	24	69	2
Junior High	A	B	C	D	E
Wawona	3	13	55	28	
Irwin	10	14	38	33	5
Hamilton	0	5	58	37	
Ahwahnee	10	17	66	7	
Tenaya	9	11	56	24	
Total Jr. High Percentages	5	11	56	26	
TOTAL JR. & SR. HIGH PERCENTAGES	3	8	43	45	1

COMMENTS:

4. In your subjects, how would you classify the source of information covered by the teacher and given to you in assignments?

A. A mixture of different resources
B. Mostly from one textbook, but some outside references
C. All from one textbook
D. Up to us to find out

Senior High	A	B	C	D	E
Bullard	83	13	5	0	
Hoover	49	46	5	0	
Fresno	48	41	11	0	
Edison	46	51	2	0	
Total Sr. High Percentages	59	35	6	0	

Junior High	A	B	C	D	E
Wawona	28	58	12	2	
Irwin	29	43	24	5	
Hamilton	32	54	10	3	
Ahwahnee	34	41	5	20	
Tenaya	15	69	15	1	
Total Jr. High Percentages	27	56	12	5	
TOTAL JR. & SR. HIGH PERCENTAGES	41	47	9	3	

COMMENTS:

5. Do you feel as though you are free to express your opinions?

A. Any time B. Some of the time C. Very little D. Not at all

Senior High	A	B	C	D	E
Bullard	79	16	3	0	
Hoover	44	41	10	3	
Fresno	76	9	4	0	
Edison	63	24	12	0	
Total Sr. High Percentages	71	21	7	1	

Junior High	A	B	C	D	E
Wawona	23	53	15	7	
Irwin	19	33	29	19	
Hamilton	29	46	24	2	
Ahwahnee	27	41	20	12	
Tenaya	34	49	11	4	
Total Jr. High Percentages	27	48	18	8	
TOTAL JR. & SR. HIGH PERCENTAGES	45	36	13	4	

COMMENTS:

6. If you do voice your opinion, would you say the teacher "really" listens, and what you have said "counts?"

A. Yes B. Half and Half C. Some of the time D. No

Senior High	A	B	C	D	E
Bullard	71	19	3	6	
Hoover	36	33	18	10	
Fresno	65	22	7	2	
Edison	63	22	15	0	
Total Sr. High Percentages	61	24	10	5	

Junior High	A	B	C	D	E
Wawona	36	27	29	7	
Irwin	29	29	33	10	
Hamilton	31	34	31	5	
Ahwahnee	22	34	22	22	
Tenaya	39	35	17	7	
Total Jr. High Percentages	33	32	26	9	
TOTAL JR. & SR. HIGH PERCENTAGES	45	28	19	7	

COMMENTS:

7. Have you ever been encouraged to (or tried to) select what you would like to study in class?

A. Most of the time B. About half the time. C. Some of the time

D. Never

Senior High	A	B	C	D	E
Bullard	10	8	54	29	
Hoover	5	8	46	41	
Fresno	4	2	33	61	
Edison	7	10	51	27	1
Total Sr. High Percentages	7	7	46	40	1

Junior High	A	B	C	D	E
Wawona	23	14	47	15	1
Irwin	29	19	14	33	5
Hamilton	8	7	44	41	
Ahwahnee	15	15	39	29	2
Tenaya	6	4	40	47	
Total Jr. High Percentages	16	11	41	31	1
TOTAL JR. & SR. HIGH PERCENTAGES	12	9	43	35	1

COMMENTS:

8. Do you receive individual attention from your teachers?

A. Always when I need it B. About half the time when I need it

C. Some of the time D. Never

Senior High	A	B	C	D	E
Bullard	46	10	25	19	
Hoover	41	15	28	15	
Fresno	59	19	15	7	
Edison	51	15	22	10	
Total Sr. High Percentages	50	14	22	13	

Junior High	A	B	C	D	E
Wawona	40	24	31	5	
Irwin	19	48	24	10	
Hamilton	36	15	37	12	
Ahwahnee	22	20	39	20	
Tenaya	43	18	33	4	
Total Jr. High Percentages	35	22	34	9	
TOTAL JR. & SR. HIGH PERCENTAGES	41	19	29	11	

COMMENTS:

9. Do you feel as though you must "play the game of school" and agree with your teachers in order to get a good grade?

A. Of course, that's just the way it is.

B. Most of my teachers expect me to agree with them.

C. I feel free to give opinions only when asked.

D. I am free to say what I feel without fear of it affecting my grade.

Senior High	A	B	C	D	E
Bullard	10	13	13	65	
Hoover	21	26	10	41	
Fresno	4	15	24	48	
Edison	10	10	29	51	
Total Sr. High Percentages	11	16	19	54	

Junior High	A	B	C	D	
Wawona	14	24	29	30	1
Irwin	14	24	24	33	
Hamilton	10	19	22	49	
Ahwahnee	20	17	27	37	
Tenaya	13	15	38	33	
Total Jr. High Percentages	14	19	28	37	
TOTAL JR. & SR. HIGH PERCENTAGES	12	18	24	43	

COMMENTS:

10. Do your teachers really "care" about you as a person?

A. Almost all of them B. Some of them do C. Very few really do
D. None of them do

Senior High	A	B	C	D	E
Bullard	17	56	25	2	
Hoover	33	38	26	3	
Fresno	31	50	17	2	
Edison	41	44	10	5	
Total Sr. High Percentages	29	48	20	3	

Junior High	A	B	C	D	E
Wawona	48	38	10	2	
Irwin	51	24	0	19	
Hamilton	25	46	24	5	
Ahwahnee	15	29	44	12	
Tenaya	28	47	22	1	
Total Jr. High Percentages	34	39	20	6	
TOTAL JR. & SR. HIGH PERCENTAGES	32	43	20	4	

COMMENTS:

11. How do most of your teachers grade you?

A. On how much effort I put into the assignments
B. On how long it took me
C. Getting the right answers--no matter how
D. On my performance, regardless of the time or effort I put into it

Senior High	A	B	C	D	E
Bullard	25	2	16	57	
Hoover	18	0	18	64	
Fresno	31	4	26	39	
Edison	56	2	7	34	
Total Sr. High Percentages	32	2	17	49	

Junior High	A	B	C	D	E
Wawona	60	0	13	27	
Irwin	38	5	29	29	
Hamilton	47	0	20	32	
Ahwahnee	51	10	7	32	
Tenaya	40	1	17	40	
Total Jr. High Percentages	50	2	16	32	
TOTAL JR. & SR. HIGH PERCENTAGES	42	2	17	39	

COMMENTS:

12. How much time do you think is wasted in the classroom?

A. None of it		B. About 10%	C. About 50%	D. Most of the time
Senior High	A	B	C	D	E
Bullard	19	62	17	2	
Hoover	10	51	33	5	
Fresno	35	50	9	6	
Edison	22	59	15	5	
Total Sr. High Percentages	22	56	18	4	
Junior High	A	B	C	D	E
Wawona	13	64	21	2	
Irwin	29	51	0	19	
Hamilton	12	68	17	3	
Ahwahnee	20	56	10	15	
Tenaya	16	73	9	1	
Total Jr. High Percentages	16	65	14	6	
TOTAL JR. & SR. HIGH PERCENTAGES	19	61	16	5	

COMMENTS:

13. If teachers were to tell you exactly what it is they wanted you to do for their subjects, how much time would the teacher need to spend in class?

A. All the time B. About 75% C. About 50% D. Just be there occasionally to answer a few questions

Senior High	A	B	C	D
Bullard	16	27	38	19
Hoover	8	13	38	36
Fresno	17	13	33	30
Edison	15	29	29	27
Total Sr. High Percentages	15	21	35	27

Junior High	A	B	C	D
Wawona	14	13	37	35
Irwin	24	29	19	29
Hamilton	12	24	32	32
Ahwahnee	15	24	24	37
Tenaya	14	22	31	31
Total Jr. High Percentages	15	20	31	34
TOTAL JR. & SR. HIGH PERCENTAGES	14	20	33	31

COMMENTS:

14. Do you think your teachers enjoy being in the classroom doing what they do?

A. All of them B. Most of them C. Some of them D. None of them

Senior High	A	B	C	D
Bullard	17	59	24	0
Hoover	8	49	38	3
Fresno	15	57	26	0
Edison	20	41	39	0
Total Sr. High Percentages	15	53	30	1

Junior High	A	B	C	D
Wawona	30	42	21	5
Irwin	19	29	43	10
Hamilton	22	31	42	5
Ahwahnee	5	39	49	7
Tenaya	26	44	25	4
Total Jr. High Percentages	23	38	33	5
TOTAL JR. & SR. HIGH PERCENTAGES	20	44	32	3

COMMENTS:

15. Do most of your classes require?

A. Memorization only B. A great deal of thought

C. Application of learned principles D. A good combination of memory and independent reasoning?

Senior High	A	B	C	D
Bullard	21	8	24	56
Hoover	21	15	18	44
Fresno	13	15	35	37
Edison	10	39	24	27
Total Sr. High Percentages	16	17	26	40

Junior High	A	B	C	D
Wawona	12	37	21	30
Irwin	5	33	29	33
Hamilton	14	17	34	34
Ahwahnee	7	22	29	39
Tenaya	15	20	24	41
Total Jr. High Percentages	11	26	26	35
TOTAL JR. & SR. HIGH PERCENTAGES	14	23	26	37

COMMENTS:

16. How do you feel about what you have learned so far in school?

A. Most of what I will have studied will be helpful and beneficial to me.
B. About half what I learn will be helpful in the "real" world.
C. Some of what I learn will be helpful.
D. I could have done better on my own.

Senior High	A	B	C	D
Bullard	44	38	11	3
Hoover	33	33	26	5
Fresno	46	28	22	4
Edison	61	17	22	0
Total Sr. High Percentages	46	30	19	3

Junior High	A	B	C	D
Wawona	63	26	12	0
Irwin	62	29	0	10
Hamilton	49	25	19	7
Ahwahnee	37	32	22	7
Tenaya	35	47	16	1
Total Jr. High Percentages	50	31	15	4
TOTAL JR. & SR. HIGH PERCENTAGES	48	31	17	3

COMMENTS:

17. How much time would you guess the teachers spend in needless repetition of what they say?

A. Very little B. Almost half C. Over half D. Most of it

Senior High	A	B	C	D
Bullard	68	29	2	2
Hoover	54	31	13	3
Fresno	59	20	7	7
Edison	46	29	17	5
Total Sr. High Percentages	59	27	9	4

Junior High	A	B	C	D
Wawona	41	36	12	12
Irwin	57	10	19	14
Hamilton	39	41	12	8
Ahwahnee	29	41	10	20
Tenaya	47	31	13	7
Total Jr. High Percentages	41	35	12	11
TOTAL JR. & SR. HIGH PERCENTAGES	49	32	11	8

COMMENTS:

18. How much of the time in class do you just "turn the teacher off?"

A. Hardly ever B. Some of the time C. About half the time

D. Most of the time

Senior High	A	B	C	D
Bullard	19	51	22	8
Hoover	8	59	15	18
Fresno	35	41	20	2
Edison	20	51	20	10
Total Sr. High Percentages	22	50	20	9

Junior High	A	B	C	D
Wawona	35	36	19	10
Irwin	29	43	10	19
Hamilton	17	58	24	2
Ahwahnee	27	39	20	15
Tenaya	33	53	13	1
Total Jr. High Percentages	29	45	18	8
TOTAL JR. & SR. HIGH PERCENTAGES	25	47	19	8

COMMENTS:

19. Which of the following words best describes your classrooms?

A. Formal B. Stiff C. Informal D. Relaxed

Senior High	A	B	C	D
Bullard	2	10	44	43
Hoover	0	13	44	41
Fresno	0	19	33	48
Edison	22	17	20	41
Total Sr. High Percentages	5	14	36	44

Junior High	A	B	C	D
Wawona	14	24	33	28
Irwin	29	38	19	14
Hamilton	7	31	31	32
Ahwahnee	0	49	22	29
Tenaya	11	13	36	40
Total Jr. High Percentages	11	28	30	31
TOTAL JR. & SR. HIGH PERCENTAGES	8	22	33	36

COMMENTS:

20. Over-all, which of the following best describes your feeling about school?

A. Strongly approve B. Slightly approve C. Slightly disapprove
D. Strongly disapprove

Senior High	A	B	C	D
Bullard	38	43	14	3
Hoover	49	28	13	8
Fresno	56	26	13	6
Edison	56	32	12	0
Total Sr. High Percentages	49	33	13	4

Junior High	A	B	C	D
Wawona	41	36	9	10
Irwin	38	38	10	14
Hamilton	41	39	12	8
Ahwahnee	20	46	20	15
Tenaya	44	39	15	1
Total Jr. High Percentages	38	39	13	9
TOTAL JR. & SR. HIGH PERCENTAGES	43	37	13	7

COMMENTS:

INSTRUCTIONS

We are collecting information from various people by having them judge the meanings of certain words or statements. You will be given a concept or descriptive statement at the top of the page and will then check its meaning to you on a number of scales which follow the concept. Please rate the concept on each of the scales in order.

Here is how you are to use these scales:

If you feel that the concept at the top of the page is *very closely related* to one end of the scale, you should place your check-mark as follows:

fair__X__:_____:_____:_____:_____:_____:_____unfair

OR

fair_____:_____:_____:_____:_____:_____:__X__unfair

If you feel that the concept is *quite closely related* to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong_____:__X__:_____:_____:_____:_____:_____weak

OR

strong_____:_____:_____:_____:_____:__X__:_____weak

If the concept seems *only slightly related* to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active_____:_____:__X__:_____:_____:_____:_____passive

OR

active_____:_____:_____:_____:__X__:_____:_____passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging.

If the consider the concept to be *neutral* on the scale, both sides of the scale *equally associated* with the concept, or if the scale is *completely irrelevant*, unrelated to the concept, then you should place your check-mark in the middle space:

safe_____:_____:_____:__X__:_____:_____:_____dangerous

IMPORTANT: (1) Place your check-marks *in the middle of spaces*, not on the boundaries:

THIS NOT THIS

_____:_____:_____:__X__:_____:_____:_____
X

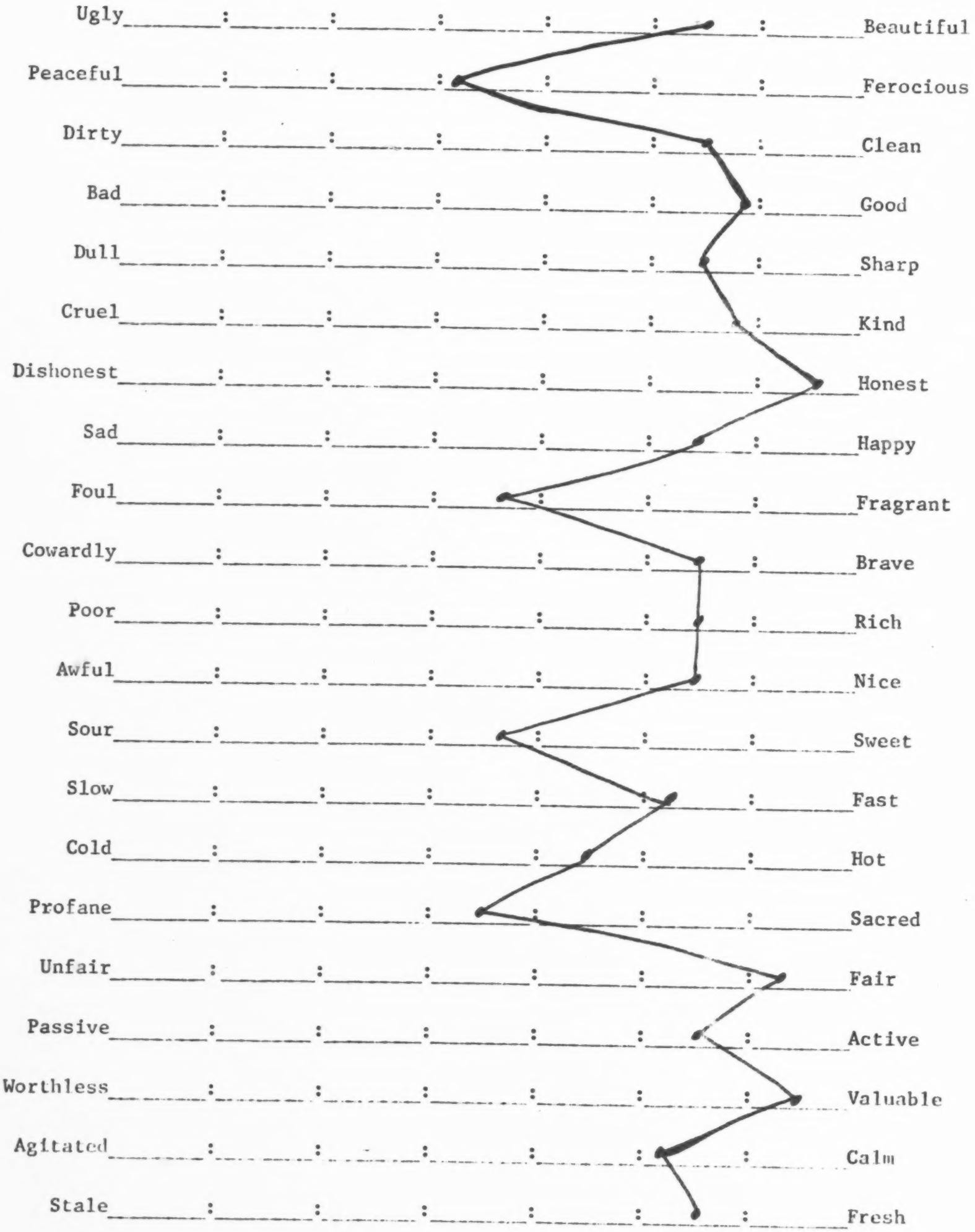
(2) Be sure you check every scale for every concept--*do not omit any*.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so *do not look back and forth* through the items. Do not try to remember how you checked similar items earlier in the test. *Make each item a separate and independent judgment*. Work at fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

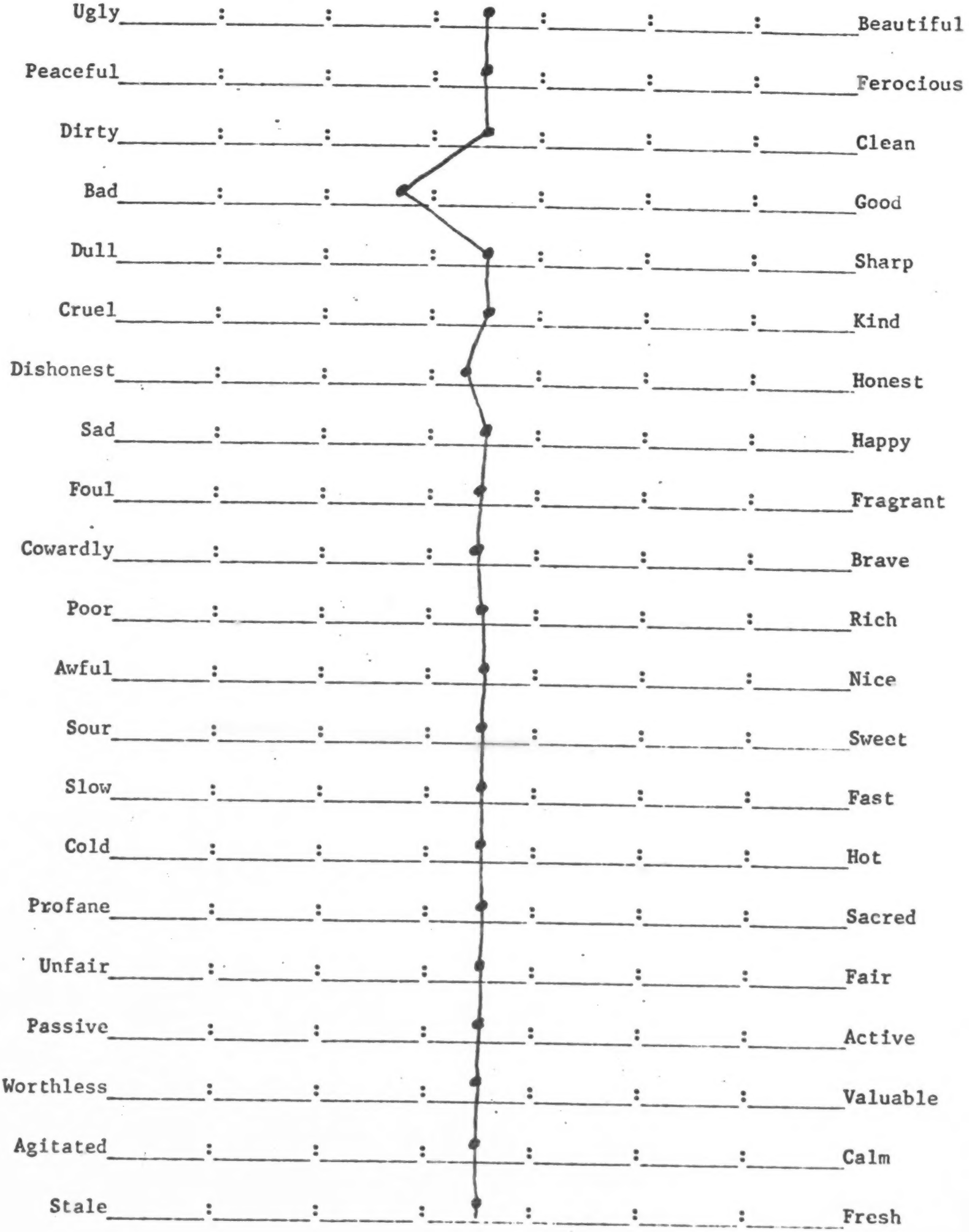
ALL TEACHERS N = 55

MY TEACHING

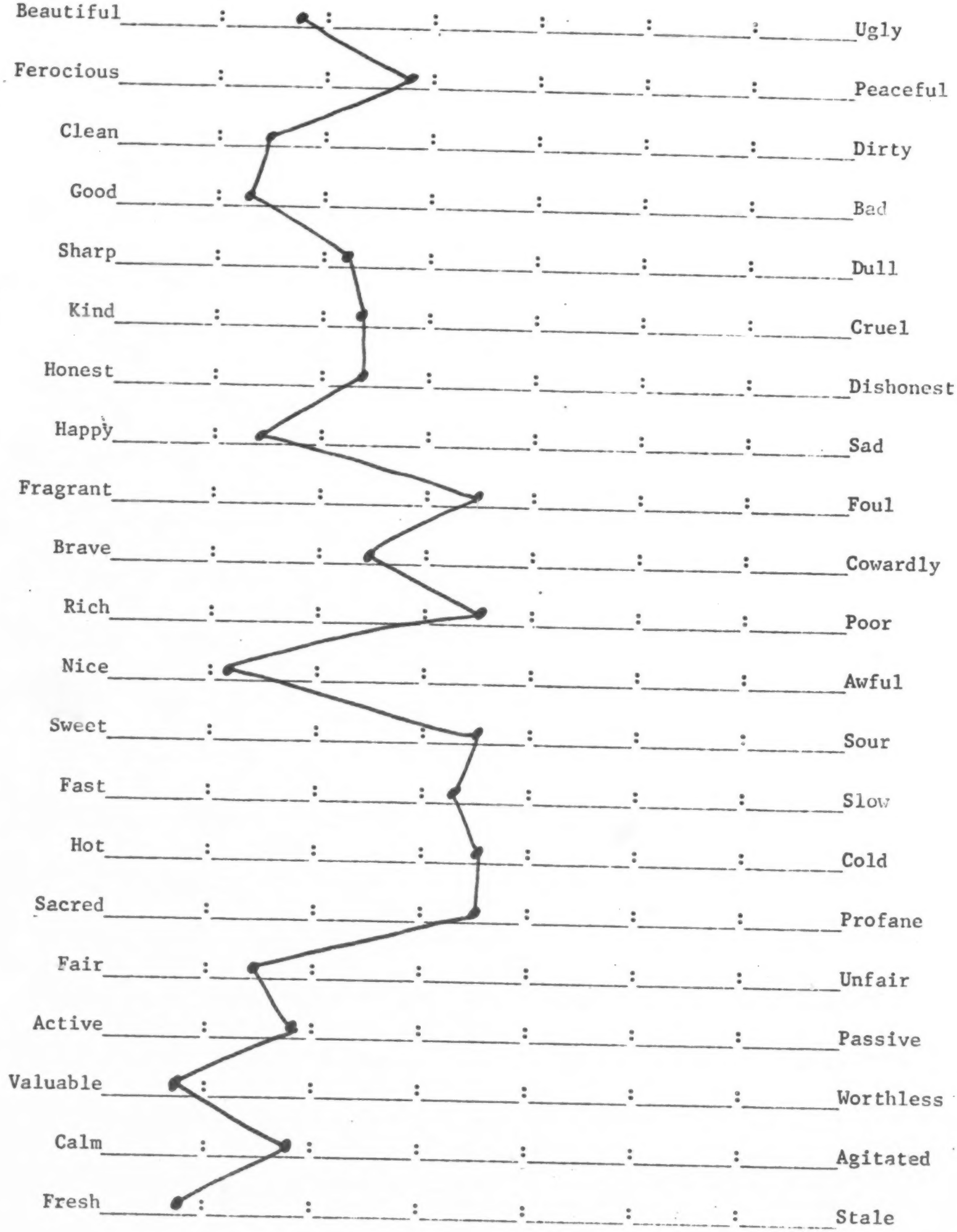

Ugly : : : : : : Beautiful
Peaceful : : : : : : Ferocious
Dirty : : : : : : Clean
Bad : : : : : : Good
Dull : : : : : : Sharp
Cruel : : : : : : Kind
Dishonest : : : : : : Honest
Sad : : : : : : Happy
Foul : : : : : : Fragrant
Cowardly : : : : : : Brave
Poor : : : : : : Rich
Awful : : : : : : Nice
Sour : : : : : : Sweet
Slow : : : : : : Fast
Cold : : : : : : Hot
Profane : : : : : : Sacred
Unfair : : : : : : Fair
Passive : : : : : : Active
Worthless : : : : : : Valuable
Agitated : : : : : : Calm
Stale : : : : : : Fresh

THE SCHOOL BOARD

Beautiful	:	:	:	:	:	:	Ugly
Ferocious	:	:	:	:	:	:	Peaceful
Clean	:	:	:	:	:	:	Dirty
Good	:	:	:	:	:	:	Bad
Sharp	:	:	:	:	:	:	Dull
Kind	:	:	:	:	:	:	Cruel
Honest	:	:	:	:	:	:	Dishonest
Happy	:	:	:	:	:	:	Sad
Fragrant	:	:	:	:	:	:	Foul
Brave	:	:	:	:	:	:	Cowardly
Rich	:	:	:	:	:	:	Poor
Nice	:	:	:	:	:	:	Awful
Sweet	:	:	:	:	:	:	Sour
Fast	:	:	:	:	:	:	Slow
Hot	:	:	:	:	:	:	Cold
Sacred	:	:	:	:	:	:	Profane
Fair	:	:	:	:	:	:	Unfair
Active	:	:	:	:	:	:	Passive
Valuable	:	:	:	:	:	:	Worthless
Calm	:	:	:	:	:	:	Agitated
Fresh	:	:	:	:	:	:	Stale


Ugly : : : : : : Beautiful
Peaceful : : : : : : Ferocious
Dirty : : : : : : Clean
Bad : : : : : : Good
Dull : : : : : : Sharp
Cruel : : : : : : Kind
Dishonest : : : : : : Honest
Sad : : : : : : Happy
Foul : : : : : : Fragrant
Cowardly : : : : : : Brave
Poor : : : : : : Rich
Awful : : : : : : Nice
Sour : : : : : : Sweet
Slow : : : : : : Fast
Cold : : : : : : Hot
Profane : : : : : : Sacred
Unfair : : : : : : Fair
Passive : : : : : : Active
Worthless : : : : : : Valuable
Agitated : : : : : : Calm
Stale : : : : : : Fresh

MY STUDENTS


Beautiful : : : : : : Ugly
Ferocious : : : : : : Peaceful
Clean : : : : : : Dirty
Good : : : : : : Bad
Sharp : : : : : : Dull
Kind : : : : : : Cruel
Honest : : : : : : Dishonest
Happy : : : : : : Sad
Fragrant : : : : : : Foul
Brave : : : : : : Cowardly
Rich : : : : : : Poor
Nice : : : : : : Awful
Sweet : : : : : : Sour
Fast : : : : : : Slow
Hot : : : : : : Cold
Sacred : : : : : : Profane
Fair : : : : : : Unfair
Active : : : : : : Passive
Valuable : : : : : : Worthless
Calm : : : : : : Agitated
Fresh : : : : : : Stale

CENTRAL OFFICE STAFF

Ugly_____:_____:_____:_____:_____:_____:_____Beautiful

Peaceful_____:_____:_____:_____:_____:_____:_____Ferocious

Dirty_____:_____:_____:_____:_____:_____:_____Clean

Bad_____:_____:_____:_____:_____:_____:_____Good

Dull_____:_____:_____:_____:_____:_____:_____Sharp

Cruel_____:_____:_____:_____:_____:_____:_____Kind

Dishonest_____:_____:_____:_____:_____:_____:_____Honest

Sad_____:_____:_____:_____:_____:_____:_____Happy

Foul_____:_____:_____:_____:_____:_____:_____Fragrant

Cowardly_____:_____:_____:_____:_____:_____:_____Brave

Poor_____:_____:_____:_____:_____:_____:_____Rich

Awful_____:_____:_____:_____:_____:_____:_____Nice

Sour_____:_____:_____:_____:_____:_____:_____Sweet

Slow_____:_____:_____:_____:_____:_____:_____Fast

Cold_____:_____:_____:_____:_____:_____:_____Hot

Profane_____:_____:_____:_____:_____:_____:_____Sacred

Unfair_____:_____:_____:_____:_____:_____:_____Fair

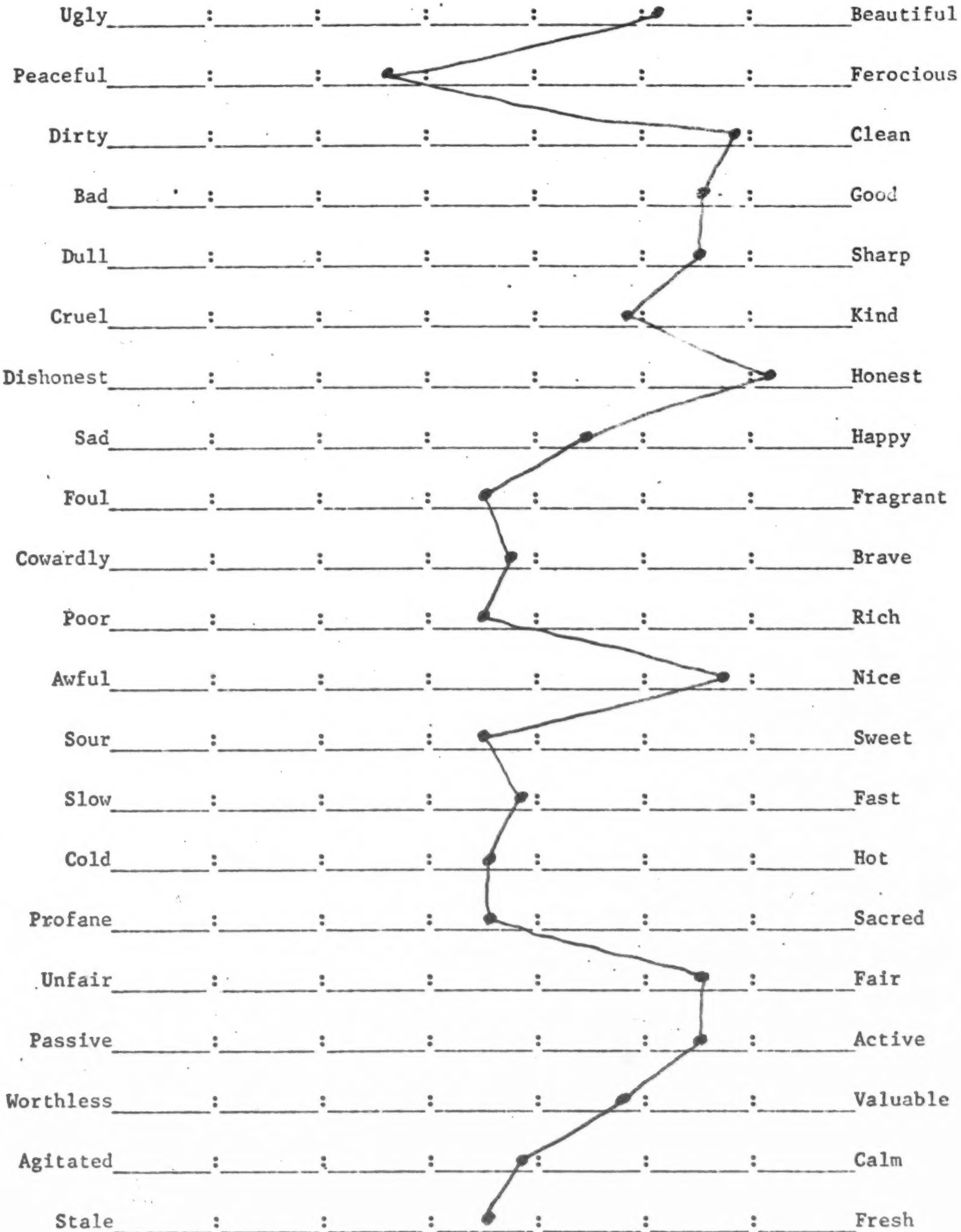
Passive_____:_____:_____:_____:_____:_____:_____Active

Worthless_____:_____:_____:_____:_____:_____:_____Valuable

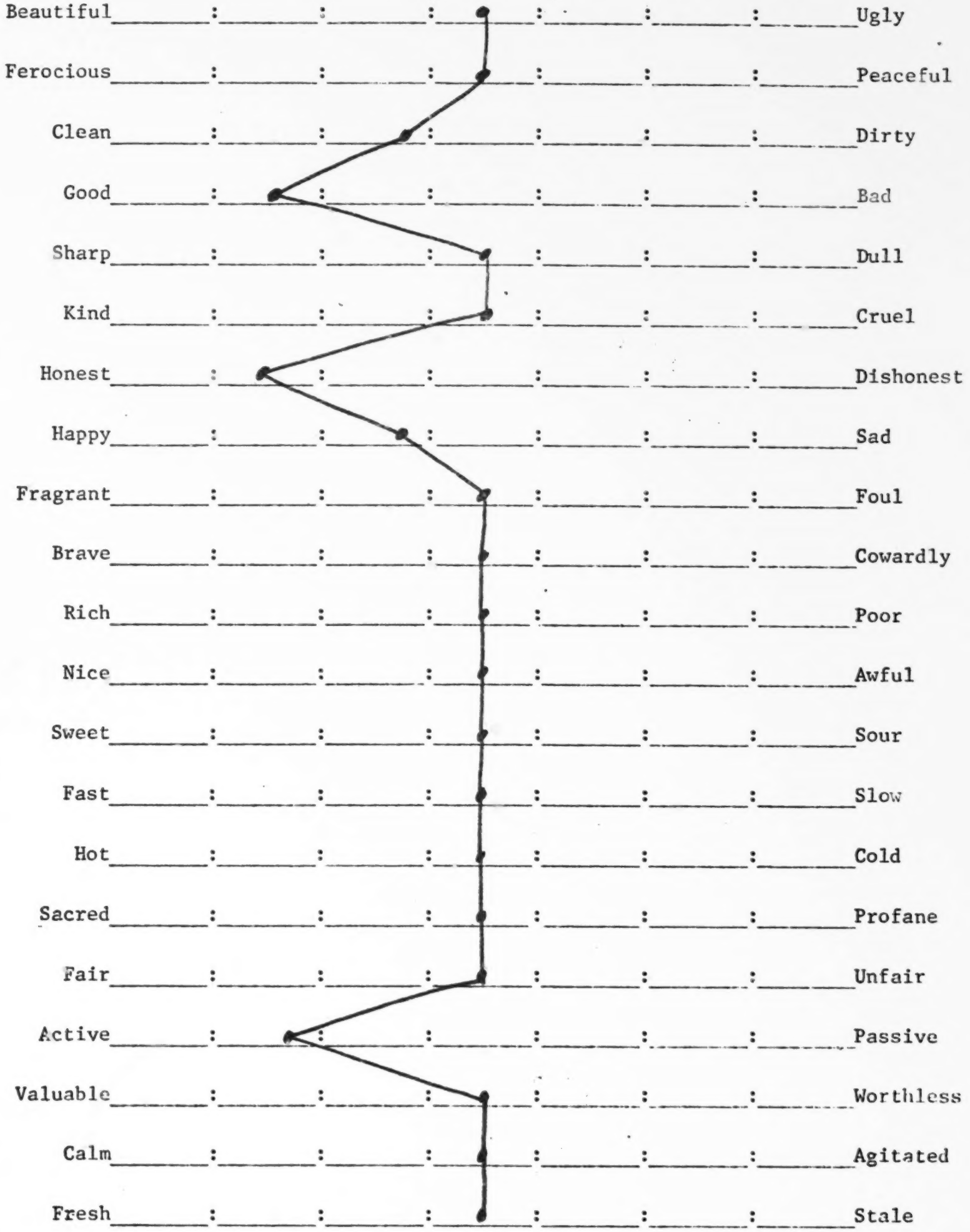
Agitated_____:_____:_____:_____:_____:_____:_____Calm

Stale_____:_____:_____:_____:_____:_____:_____Fresh

FELLOW TEACHERS


Ugly : : : : : : Beautiful
Peaceful : : : : : : Ferocious
Dirty : : : : : : Clean
Bad : : : : : : Good
Dull : : : : : : Sharp
Cruel : : : : : : Kind
Dishonest : : : : : : Honest
Sad : : : : : : Happy
Foul : : : : : : Fragrant
Cowardly : : : : : : Brave
Poor : : : : : : Rich
Awful : : : : : : Nice
Sour : : : : : : Sweet
Slow : : : : : : Fast
Cold : : : : : : Hot
Profane : : : : : : Sacred
Unfair : : : : : : Fair
Passive : : : : : : Active
Worthless : : : : : : Valuable
Agitated : : : : : : Calm
Stale : : : : : : Fresh

THIS SCHOOL DISTRICT


Beautiful : : : : : : Ugly
Ferocious : : : : : : Peaceful
Clean : : : : : : Dirty
Good : : : : : : Bad
Sharp : : : : : : Dull
Kind : : : : : : Cruel
Honest : : : : : : Dishonest
Happy : : : : : : Sad
Fragrant : : : : : : Foul
Brave : : : : : : Cowardly
Rich : : : : : : Poor
Nice : : : : : : Awful
Sweet : : : : : : Sour
Fast : : : : : : Slow
Hot : : : : : : Cold
Sacred : : : : : : Profane
Fair : : : : : : Unfair
Active : : : : : : Passive
Valuable : : : : : : Worthless
Calm : : : : : : Agitated
Fresh : : : : : : Stale

7

#18. Teaching/Learning Process

MAJOR CONCLUSIONS IDENTIFIED BY PROJECT STAFF

18-1. A sound basis for learning should be predicated upon creation of behavioral change resulting from the acquisition of information which has personal meaning. In the process the student must:

a. Learn to select from a breadth of alternatives and to accept responsibility for his choices.
b. Be actively involved in the learning process.
c. Develop tools of inquiry.
d. Be motivated intrinsically rather than extrinsically.
e. Feel confident in his own learning and skills because the teacher does believe in his ability to learn; self-esteem must exist for instruction to be effective.
f. Be allowed to participate in a learning design which is a continuous human process reflecting open-endedness.

18 - 2 The learner must be continually informed of his progress in in such a way that he will not be negatively affected by the evaluation process which at present is threatening.

18 - 3. Teachers need to have a strong, personal commitment to a sound theoretical position in regard to their teaching so they can formulate their own comfortable personal style of working with students.

18 - 4 The overwhelming majority of instructional time in the Fresno City Unified School District is employed in teacher presentation techniques in which the student is passive; little or no active involvement or interaction is apparent.

18 - 5 A significant number of students feel that much of the current instructional material is irrelevant to their needs.

18 - 6 Teachers appear to be universally content conscious, but unsure of their base in terms of learning theory and process.

18 - 7 Teachers and administrators appear willing to discuss improvement through change, but little evidence exists that such change is actually taking place.

18 - 8 Teachers discuss in favorable terms the classroom situation and their students, but hesitate to discuss matters outside their immediate classroom; the situation implies that teachers feel threatened, scared or lack commitment to the district's educational program.

18 - 9 Administration and staff must accept and work with the fact that improvement means change.

18 - 10 If change is to take place in the instructional program teachers must have confidence that educational leaders are knowledgeable about learning processes and are supportive of change.

18 - 11 The district needs to be willing to start on a plan of action for producing change in teacher attitudes and teaching methods.

18 - 12 The details of a plan of action for educational change must be a product of felt need, and be perceived by the staff as emanating from the staff.

18 - 13 "In-Service" training in learning process needs to have equal priority with current assignments.

18 14 A design for learning must recognize both people and the institutional framework in which they work.

PROJECT DESIGN

NEEDS ASSESSMENT PUBLICATIONS

1. Brainstorm - Needs Perceived by School Staff
2. Speak-Up - Needs Perceived by Community
3. Student Speak-Up - Needs Perceived by Secondary Students
4. School Staffing
5. Analysis of Achievement
6. Problems Perceived by Educational Leadership

County Schools Survey

7. Vocational Occupational Needs Survey (published by County Regional Planning and Evaluation Center - EDICT)

8.
9. > Other County School Needs Survey Reports (by EDICT)

TASK FORCE

Educational Content Fields

10. Reading
11. Language
12. Mathematics
13. Science
14. Foreign Language
15. Cultural Arts
16. Social Science
17. Physical Education

Other Educational Areas

18. Teaching/Learning Process
19. Special Education
20. Guidance
21. Health
22. Student Personnel
23. Adult Education
24. Vocational Education

Urban Physical Factors

25. Urban Physical Factors

Urban Social and Human Factors

26. Relevance and Quality of Education for Minorities
27. Special Needs of Mexican-Americans
28. Special Needs of Negroes

29. Conclusions from Needs Assessment Publications
30. Summary - Fresno Educational Needs Assessment
31. The Process of Educational Planning